

REMARKS

This communication is in response to the Office Action mailed on May 28, 2008. In the Office Action, claims 1-3, 7-20, and 32-33, 35, and 38-52 were pending and were rejected. By this response, claims 1, 14, 16, 32, and 41 have been amended and claims 35 and 38 have been canceled. All of the other remaining pending claims are unchanged in the application. Applicants respectfully request reconsideration and allowance of the pending claims.

Claim Objection

On page 2, it is reported that claim 32 has been objected to because of a typographical error. Claim 32 has been amended to address the objection. Withdrawal of the rejection is respectfully requested.

Claim Rejections 35 U.S.C. § 102

On page 2, it is reported that claims 1-3, 7, 11, 15, 17, 19, 32-33, 35, 39-40, 41-44, 48 and 51-52 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Pat. No. 5,734,889 of Yamaguchi. Claims 1, 32 and 41 are independent. Claim 35 is canceled. Applicant respectfully disagrees with the rejections, but has made amendments to some of the claims to further clarify their patentable subject matter.

Independent claim 1 is directed toward a method of processing data stored in a structured data source. The method includes receiving a natural language input and analyzing the input to identify semantic information contained therein. The method further includes associating portions of the natural language input with a command object identifying a command from a plurality of commands. The plurality of commands are related to rendering data that has been retrieved from the structured data source and designated for rendering. Portions of the natural language input are also associated with a frame object and an entity object of a schema. The frame object identifies identifying an arrangement for rendering the designated data selected from a plurality of different arrangements for rendering data. The entity object is based on the

semantic information and the natural language input and relates to data in the data source that is to be rendered based on the command object and the frame object. The method further includes rendering the designated data from the data source in a table of columns and rows based on the schema and the associated portions of the natural language input.

Applicants respectfully submit that Yamaguchi fails to teach or suggest all of the recited features of claim 1. For example, Applicants submit that Yamaguchi fails to teach or suggest “associating portions of [a] natural language input with a command object identifying a command from a plurality of commands, wherein the plurality of commands are related to rendering data that has been retrieved from [a] structured data source and designated for rendering”. On page 3, the Office Action asserts that Yamaguchi teaches “translating the natural language input into a SQL statement.” However, the Applicants point out that such a teaching is directed toward retrieving data from a structured data source and not toward “rendering data that has been retrieved from [a] structured data source”.

Furthermore, Yamaguchi is silent with regards to associating portions of [a] natural language input with a frame object identifying an arrangement for rendering the designated data selected from a plurality of different arrangements for rendering data. The Office Action points out on page 3 that “retrieved data can be ‘reformed’”. However, the Applicants submit that the “reforming” is nothing more than designating the data to be rendered. By eliminating “unnecessary lines” and converting punctuation marks that are ultimately not rendered, Applicants submit that Yamaguchi is not teaching multiple frames to which portions of the natural language input can be associated, but rather merely designating which data is to be rendered. Once that data is designated, Applicants see only one disclosed way for data to be rendered. Therefore, Applicants submit that Yamaguchi fails to teach or suggest all of the recited features of claim 1 and that claim 1 and its dependent claims 2-3, 7, 11, 15, 17, and 19 are allowable over Yamaguchi.

Claim 32 is directed toward a method of processing information to drive an application. The method includes providing an interactive interface to a user for entering a natural language input. The method further includes receiving the natural language input and analyzing the natural language input to identify semantic information contained therein. A schema is accessed to identify a command object, a frame object and an entity object based on the semantic information and the natural language input, the command object identifying a command performed in the application, the frame object identifying how to render data retrieved from a data source and the entity object associated with a portion of the retrieved data that is designated for use by the application. Then, an action is performed that is associated with the application based on the command object, the frame object and the entity object. The action includes rendering all of the designated data into each of a plurality of candidate tables based on a plurality of candidate interpretations of semantic information provided in the natural language input. Rendering each of the candidate tables includes rendering the designated data in a candidate table of columns and rows. The frame object associates the entity object with the command object such that the frame object defines what portion of the designated data identified by the entity object is displayed in the columns and what portion of the designated data identified by the entity object is displayed in the rows.

Applicants submit that Yamaguchi fails to teach or suggest a performing an action that includes rendering all of the designated data into each of a plurality of candidate tables based on a plurality of candidate interpretations of semantic information provided in the natural language input. Applicants submit that Yamaguchi teaches only rendering a single table for its data, not a plurality of candidate tables. Therefore, Applicants submit that claim 32 and its dependent claims 33 and 39-40 are allowable over Yamaguchi.

Claim 41 is directed toward a method of displaying information from a data source. The method includes receiving a first natural language input from a user and the first natural language input to identify semantic information contained therein. Portion of the first natural language input are

associated with a command object, a frame object and an entity object of a schema based on the semantic information and the first natural language input. A table of columns and rows is displayed to the user illustrating data retrieved from the data source as a function of the command object, the frame object and the entity object. A second natural language input from the user referring to the table of columns and rows. The schema is altered based on the second natural language input and the arrangement of the previously displayed data in the table is modified as a function of the altered schema and the newly arranged data is displayed in a modified table to the user.

In contrast to the subject matter recited in claim 41, Yamaguchi simply does not disclose or otherwise describe modifying a current table that has already been displayed. There is no teaching in Yamaguchi of modifying an already displayed table via a second natural language input, which in turn causes the schema to be altered and the arrangement of previously displayed data to be modified. As such independent claim 41 is believed to be allowable. Claims 42-44, 48 and 51-52 are also believed to be allowable at least based on their relation to claim 41. Withdrawal of the rejection is respectfully requested.

Claim Rejections 35 U.S.C. § 103

On page 7 it is reported that claims 8-10, 12, 18, 45-47, and 49 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yamaguchi in view of U.S. Pat. Pub. No. 2005/0216421 of Barry et al. Claims 8-10, 12, and 18 depend from independent claim 1 and claims 45-47 and 49 depend from independent claim 41. As discussed above, it is believed that both of the independent claims 1 and 41 are allowable. Therefore, Applicants submit that these claims are allowable based at least upon their dependency on allowable claims. Withdrawal of the rejection is respectfully requested.

On page 10 it is reported that claims 14, 16, 20, and 38 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Yamaguchi in view of U.S. Pat. No. 5,960,384 of Brash. Claim 38 is canceled. Claims 14, 16, and 20 depend from independent claim 1, which as

discussed above, is believed to be allowable. Therefore, Applicants submit that claims 14, 16, and 20 are allowable based at least upon their dependency on an allowable claim. Withdrawal of the rejection is respectfully requested.

Based on the foregoing, Applicants respectfully request that the present application be allowed. Favorable action is requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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